

which, on fair days, are profusely introduced by a rural population into the squares and market-places, whilst the peasantry in various costumes, engaged in the conveyance of every description of land produce, or in more stationary occupations of traffic and barter, complete a scene which, if compared with similar subjects at home, would present striking differences and a most pleasing originality.

A character which is peculiar to many of the old villages in the north of France is that of an assemblage of small untidy and irregularly distributed cottages, the roofs steep, with a small chimney planted exactly at each end: they are generally congregated round some ancient church, rendered doubly conspicuous from its comparative size, and by its prominent situation in the group. The clustering of so many humble cottages around this venerable object seems like a recognition of its spiritual supremacy: it reminds one of the flock and shepherd, in a time and country where one expects little food for such impressions. These pleasing features for the most part disappear where the villages have been extended by the addition of larger and more modern dwellings.

In the south-western provinces many of the particulars which remind you of the Italian farms and houses appear in succession, and in the valleys of the Pireneæ there is a picturesque combination of the style of the latter with the form of construction which is peculiar to the Swiss cottages. The roofs, generally slated or thatched, are, like those of the Alpine chalets, broad, with projecting eaves, whilst the gable at each end rises with a succession of steps or notches to the point, where it terminates in a kind of rude finial. But the Italian character shows itself now and then in the arched doors and windows, as well as in the more abundant use of stone.

How insignificant and monotonous, after these grotesque and varied outlines, appears the uniform unbroken parallelogram which is frequently presented by the front of our English town and suburban houses. In many cases no cornice or moulding breaks the uniformity of the wall, or gives a finish to its upper boundary; whilst the box-like appearance is completed by the total absence of a roof which projects, or which, indeed, is seen at all from below.*

NEW CHURCH OF NOTRE DAME DE BON SECOURS, ROUEN.

A WRITER in the current number of the *Eccelesiologist* says of this new building:—The side doors have neither of them porches. The very deeply recessed western doorways are *per se* effective, but certainly too large in proportion to the size of the whole church. The sculpture in the tympana is not yet quite finished, and the doors themselves both here and in the aisles are yet to be added. The effect of the interior, from every window in the church being filled with stained glass, is decidedly religious, but were it not for the glass I think it would be the coldest-looking church I ever saw. The groining of the nave roof is rather poor, and when it is remembered that the whole of the building, piers, arches, and roof, are built of smoothed stone of one uniform colour, it may be easily imagined how one longs for colour. The tower internally is open, with a thin arch, showing a small rose window high up. The high altar and the fittings of the choir are, I presume, those belonging to the old church: they are as bad and as mean as can be. The altar (the reredos of which contains the celebrated image of "Notre Dame de Bon Secours") is in the north aisle: it is made of white marble, and very beautifully carved. The reredos contains the image above mentioned holding the infant SAVIOUR, and an angel in a niche on either

side: the reredos is beautifully coloured and gilt. The centre figures are literally "dressed," that of the Blessed Virgin having on a white satin gown. The tabernacle and candlesticks are very beautiful, but I think of a little too early a type: they are richly jewelled. It is a great pity that even on so gorgeous an altar as this is, trumpery vases with artificial flowers should be suffered. The pavement to this chapel is of coloured and white marble arranged in patterns, and the screen—a low one—of silvered metal of good design. There is an altar in the opposite aisle. Polychrome is being added in the ceiling of the apse. The interior of the church is, I think, far superior to the exterior, which taken as a whole I do not think pleasing to the eye. Almost all the windows have portraits of the donors in the costume of the present day. The effect is not unsuccessful. In some cases, however, where they adjoin the "stations" which are here rendered in stained glass, in the lower part of the windows, the approximation is a little unpleasant. The east elevation is on the exterior very ineffective: the apse is thrown up, and underneath crawls, as it were, a polygonal aisle, with low lean-to roof and little windows, serving for a sacristy. The effect is bad, and for convenience in use must, I should think, be equally unsatisfactory. The interior of the north wall of the church is almost covered with votive tablets taken from the old church, which do not improve the appearance. "J'ai prié à Marie et j'ai été exaucé," is the favourite. Nothing can exceed the beauty of the position of the church standing on the brow of a lofty cliff, and overlooking Rouen to the right and the Seine rolling below, broken up by numerous islands.

AMERICAN PATENTS.

We are indebted to the *Journal of the Franklin Institute*, of Pennsylvania, for the following abstracts of patents issued in the United States:—

Brick Manufacture.—A patent for an improvement in brick-machines has been granted to Mr. Jesse Samuel, of Allentown, Pennsylvania. The patentee describes his invention as consisting, 1st, in an improved feeding arrangement, by which the desired quantity of clay to fill the moulds can be regulated to a nicety, in connection with a plunger, which partially condenses the clay into the moulds preparatory to pressing; and, 2nd, in a novel device or arrangement for clamping, removing the brick from the moulds, and placing them on a platform or apron, and which is denominated a carrier. For an improvement in brick-kilos, Mr. William Linton, of Baltimore, Maryland, has taken out a patent, under which he claims the formation of air arches or openings in the kiln, between the fire-beds, with lateral openings therein, through which a sufficient amount of air can be supplied equally to all parts of the fire-bed at the same time.

Glass.—As an improvement in frosting plates of glass, Mr. Isaac Taylor, of the city of New York, claims the use of a rocker containing pebbles, sand, and water, for frosting plates of glass, or embossed work; and in ornamental painting on glass, &c. Mr. John W. Bowers, of Brookline, Massachusetts, has patented a process which, he says, "imparts to a painting on glass an appearance very much like those figures which are executed on wood or papier maché, and which are, more or less, in part, made up of pieces of mother of pearl let into the wood. The paintings or figures produced by this method have very beautiful properties of reflecting light, such as are often exhibited by silvered prismatic or crystalline surfaces." His claim consists in combining with the process of painting and ornamenting, by metallic foil, that of corrugating or crimping the foil, so as to impart to the figure or figures a power of reflecting light so as to produce the sparkling scintillated appearance specified.

Gas.—A patent for an improvement in gas-purifying apparatus, by Mr. Abram Longbottom, of the city of New York, "relates to certain improvements in the method of purifying illuminating gas, whereby the washing

apparatus is wholly done away with, so that the gas comes from the retorts or furnaces completely purified and ready for consumption." The patentee claims the purifying the gas, by passing it through a mixture of equal measures of quick lime and of animal charcoal, in the same retort in which the gas is generated, but at a temperature so regulated that at the lowest point, or where the gas enters the composition, the mass is at a lowered heat; and at the top, or where it leaves the composition, the heat is below redness, substantially in the manner herein set forth.

Water.—An improvement in apparatus for raising water has been patented by Mr. N. H. Leebby, of Charleston, South Carolina, in which the turbine is constructed "with ribs on the outer face of its upper disk, which ribs, working under a cover to the wheel, cause, by the centrifugal effect produced while in motion, a void to be formed at or about the centre, the tendency of which will be to relieve the wheel of its weight, and consequently reduce the running friction."

Cements.—Mr. B. S. Welch, of Brooklyn, New York, claims "the primary cement formed of hydrate of lime, in a finely subdivided state, and resin in a finely subdivided state, mixed together with water in a cold state."

Anvils.—Mr. Charles Peters, of Trenton, New Jersey, and Mr. William Fetter, of Bucks County, Pennsylvania, claim as their invention "a cavity in the body of anvils, for the purpose of cooling the same, by the introduction of water or other fluid into the said cavity, while the faces of the said anvils are undergoing the process of tempering."

Nails.—For improvements in nail machines, Mr. S. G. Reynolds, of Worcester, Massachusetts, has taken out a patent, under which he claims, in the making of wrought nails, the employment of the cutter for cutting wedge-formal pieces from a previously rolled plate, of equal or nearly equal thickness, preparatory to and in combination with the moulding dies which receive the cut pieces, by suitable conveying apparatus, from the cutters, and mould them to the required form by pressure, so as to give the form by spreading the metal between the dies, instead of by elongation, as heretofore practised when making nails from cut blanks. He also claims the vibrating cutter, and faces or dies for confining and compressing the nails arranged on both sides of the cutter, when this is combined with the two stationary cutters, having a space between the two, through which the rod or plate of iron is fed.

Grindstones.—An improvement in self-sharpening grindstones has been patented by Mr. Jesse Pennabecker, of Elizabeth Township, Pennsylvania, namely, the combination of a grindstone with a self-acting picker, by which the grindstone is sharpened by its own motion or power.

CARBONIC ACID GAS IN VENTILATION.

YOUR two correspondents, "E. L. G." and "J. E. D." have rather overheated themselves in their efforts to ventilate the public. Allow me to sprinkle a little cold water on both of them. It is derived from an unexceptionable source, the "Cours de Chimie" of M. Regnault.

"Carbonic acid gas does not support respiration. Animals plunged in it die very soon from asphyxia. Nevertheless this gas exercises no deleterious action on the lungs: it may exist in considerable quantity in the air without producing any great inconvenience, provided that the oxygen remains in sufficient proportion."

"Carbonic oxide," on the contrary, "is not only incapable of supporting respiration, but acts as a violent poison. Animals perish if allowed to remain a short time in air which contains only a few hundredths of this gas. To it we must attribute the uneasiness and headache we experience in an ill-ventilated room, near an open charcoal furnace." Carbonic acid, as we all know, is heavier than atmospheric air, but carbonic oxide is specifically lighter ('967). Thus these two gentlemen, so eager to convict each other in minor matters, have both started from a fundamental error.

VICZ CORIS.

* From "The Elements of Picturesque Scenery, or Studies of Nature, made in Travel, with a View to Improvement in Landscape Painting." By Henry Twining. London: Longman, Brown, and Co. 1853. A book under the same title was privately printed and distributed by Mr. Twining a few years ago, and was quoted in our pages at the time. The present thoughtful volume consists for the most part of new matter, and such of the old as is used has been re-arranged and altered.